

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for determining sleep stages of an examinee, the method comprising:
  - detecting signals of the examinee with a biosignal detector that is non-restraint, non-contact and non-invasive to the examinee;
  - calculating a signal strength with a signal strength calculator obtained as a reciprocal of a coefficient obtained by gain-controlling the detected signals, the gain being set so that an amplitude of the output signals ~~becomes small~~decreases when a peak value of the detected signals exceeds an upper limit threshold, ~~whereas~~ and the amplitude of the output signals increases~~becomes large~~ when the peak value of the detected signals is below a lower limit threshold;
  - calculating a signal strength variance value that indicates variation of the calculated signal strength; and
  - determining a sleep stage by using the signal strength variance value or a value derived from the signal strength variance value as an indicator value.
2. (Previously Presented) The method for determining sleep stages of an examinee according to claim 1, wherein the indicator value is the signal strength variance value detected in a predetermined time period.
3. (Previously Presented) The method for determining sleep stages of an examinee according to claim 1, wherein the indicator value is a signal of a difference between the signal strength variance value detected in a predetermined time period and a moving average of the variance value.

4. (Previously Presented) The method for determining sleep stages of an examinee according to claim 1, wherein the indicator value is a moving average calculated from the signal strength variance value detected in a predetermined time period.

5. (Previously Presented) The method for determining sleep stages of an examinee according to claim 1, wherein the signal strength variance value obtained by removing abnormal values from the signal strength variance value or a value derived from the signal strength variance value is used as the indicator value.

6. (Canceled)

7. (Canceled)

8. (Previously Presented) The method for determining sleep stages of an examinee according to claim 1, wherein the biosignal detector comprises:

a pressure detection tube

a pressure detection sensor; and

a biosignal extractor, wherein the biosignal extractor extracts biosignals from a pressure variation detected by the pressure detection sensor.

9. (Previously Presented) The method for determining sleep stages of an examinee according to claim 1, wherein the biosignal detector is a heartbeat signal detector, such as at least one of an electrocardiograph and a pulse rate meter.